ETAAC Meeting November 29, 2007

Environmental Community Comments on the Economic and Technology Advancement Advisory Committee Report Discussion Draft of Nov. 15, 2007

Comments Reflect a Representative Sample of Inputs from Environmental Organizations

- Not intended to suggest 100% consensus
- Several organizations have relatively narrow focus across the spectrum of issues
- Individual groups to provide detailed comments in writing
- Individual experts on select topics may be available on phone to address questions

A History of Success

- Agree with ETAAC assessment that California has repeatedly demonstrated ability to substantially improve environment while enjoying economic growth and supporting population growth
- Support emphasis on new-, mid- and long-term goals
  - Urgent need for reductions
  - Policies and investments should pave way for, and not compromise, ability to meet vital 2050 emission reduction targets

A History of Success (cont'd)

- **Agree that complementary policies are needed to stimulate innovation**
- **Support the principle to prioritize emission reductions having public health and socio-economic co-benefits—as well as need to address environmental justice.**
  - Urge CARB to conduct more extensive outreach to E.J. community leaders throughout state in effort to learn how to achieve E.J. community goals

Financial Sector: Positive Vision and Practical Optimism

- **Recommendations provide a valuable contribution in directing policy and market incentives toward fostering innovation**
- **California Carbon Trust concept offers great promise; applaud emphasis given to:**
  - directing investments in California
  - advancing Environmental Justice goals
  - achieving long-term reductions beyond 2020
  - **Need clear mechanism to assure that E.J. communities will be empowered through Trust disbursements and other clean technology investments**

Financial Sector: Positive Vision and Practical Optimism (cont'd)

- Using policy levers to encourage diffusion of new technology as important as R&D and too often ignored
- Cleantech Workforce Training is useful step to ensure sufficient skilled labor to support new industry
  - Disadvantaged communities could be assisted consistent with AB 32's community empowerment directive

Financial Sector: Positive Vision and Practical Optimism (cont'd)

- Market mechanisms beyond auctioning (C&T) should be considered
  - Fees and rebates should be employed to harness market forces in transition to low-carbon technologies
- Municipal Assessment Districts a good idea
  - Any suggestions on how ARB might encourage municipalities to participate?

Transportation Challenges Exceed Technology and Markets

- Pleased to see report acknowledge
  - Measures to reduce travel demand and technology-forcing vehicle and fuel standards needed to achieve 2020 and 2050 limits
  - Public education campaign needed to help consumers understand climate threats and impacts of their choices
- Support development of GHG standards for medium- and heavy-duty vehicles; phase II for light duty vehicles

Transportation Challenges Exceed Technology and Markets (cont'd)

- Feebates – emissions benefits above and beyond regulatory standards; most effective would be implemented fleet-wide. Should be added to Transportation Chapter.
- Appreciate recommendation to coordinate existing funding (e.g., Moyer) to address GHGs; however, new funding is needed
- Agree that LCFS, if fully implemented, will reduce GHGs from transportation fuels on a per-gallon basis. Standard might not be sufficient to incentivize the most advanced fuels, e.g. cellulosic ethanol, electricity and H2, needed to move to near-zero fleet
  - Incentives needed for R&D to ensure that vehicle/fuel/ infrastructure technologies are harmonized to move the cleanest systems into the market

Transportation Challenges Exceed Technology and Markets (cont'd)

- **Support report's recommendations for VMT reduction; recommend adding items to improve transit, including**:
  - electronic fare collection;
  - electrification of passenger rail service;
  - time-of-arrival information;
  - and bus rapid transit (BRT)
- **Diesel reductions should be prioritized because of multiple benefits: Health benefits, traditional GHG + black carbon reductions**

A Healthy Environment and Healthy Economy

- Industrial sector – Chapter doesn't explicitly address cap-and-trade; may presume state will take this approach
- Energy efficiency standards for combustion devices could be backstop for devices traditionally untargeted; may be needed to get reductions across the board
- Loan assistance programs, information sharing and public/private partnerships are excellent approaches to improve technology deployment
- Report is mostly silent on other potential direct regulatory approaches:
  - GHG-specific measures for other large-emitters
  - Fuel switching away from fossil fuels

Building on Success in the Energy Sector

- Agree that individual programs can benefit discrete technologies
  - Different technologies play different roles in California's energy system, e.g., peak shaving, demand reduction, energy diversity
- Renewable energy will play increasingly important role
  - State should set clear requirements for the amount of renewables needed to support 2020 *and* 2050 limits
  - State could identify priorities for resources and regions and associated timetables to achieve those targets
  - In addition to continued expansion of renewable energy resources, we recommend that utilities plan for and execute a steady decrease in their reliance on carbon-emitting resources over time.

Building on Success in the Energy Sector (cont'd)

- **The "Possible Solution" section cites the (alleged) need for storage to firm intermittent resources such as wind and solar – in order to shift them from off-peak to on.**
  - This should be clarified to note that solar power IS generally on peak. Some suggest that wind and solar compliment each other.
  - CEC Intermittency Analysis Project report – new storage not necessary for 33% renewables goal
- **We recommend inclusion of molten salt and "flash" hot water storage technologies currently being developed for large-scale applications in other regions**

Building on Success in the Energy Sector (cont'd)

- **Technology-specific considerations:**
  - **The report should note that California has more potential for solar development than for any other resource, including both central station and distributed generation. Wind has tremendous economic potential.**
  - **ETAAC should emphasize peak shaving potential of energy efficiency, demand response, solar heating and cooling, etc., especially in Southern California. Support could be targeted to low-income communities.**
  - **Distributed generation and demand reduction may require greater emphasis in areas that are transmission constrained**
- **Report should recommend that barriers (e.g., demand charges and exit fees) to expanded use of combined heat and power be removed**

Agriculture Sector: Opportunity & Uncertainty

- **Ag systems are dynamic –**
  - management practices among farms
  - inherent nature of biological systems
- **Estimates of emission reductions should acknowledge such uncertainty**
- **Basis for GHG projections should be elaborated.**
  - ARB 2004 data appears to show higher emissions from 2.8 million cattle than ETAAC shows from 3.6 million head

Agriculture Sector: Opportunity & Uncertainty (cont'd)

- More research needed on the impact of feed additives on methane digesters
- Agricultural Biomass Utilization section discusses more than agricultural waste – title should be changed to reflect content
  - Increasing harvest of ag and forest residues beyond current 5 million dry tons will require more intensive management; with implications for nutrient cycling and water use
  - Increase harvest for biomass purposes will lead to increased emissions from transporting the dispersed resources, per AB 1007 report
  - Systems-wide analysis should be conducted to determine total benefits and impacts
  - State should establish independent 3rd party institution to research, test and certify technologies that can meet California environmental performance standards

Agriculture Sector: Opportunity & Uncertainty (cont'd)

- **Expanding growth of crops for fuel will require more intensive management**
  - Uncertainty about GHG footprint should be acknowledged; key uncertainty is N_2O contribution
- **Agree that conservation tillage likely to sequester carbon compared with status quo; provide co-benefits; uncertainties may remain**
- **Better estimates of land available for riparian and farmscape sequestration could be determined using GPS; interaction between fertilizers and new plant growth should be researched for N_2O impacts**

Agriculture Sector: Opportunity & Uncertainty (cont'd)

- **Precision farming – great potential for pesticide and fertilizer reduction**
- **While section mentions water management efficiency, topic is not adequately covered, given that agriculture consumes 75-80% of state's water. Increased water efficiency in ag sector can reduce GHGs two ways:**
  - Reducing emissions from over-irrigated soils
  - Avoiding the energy use to transport H_2O to agricultural areas

Forests: Source of Emissions and Reservoir for CO_2

- **Forest section – solid set of recommendations**
- **Recommend consideration of additional points:**
  - Forests should be recognized as significant source of CO_2; report should address how incentives can be used to mitigate
  - Biomass energy and fuels management should be treated as distinct activities in policy development
    - Climate benefits are assessed at different scales

Forests: Source of Emissions and Reservoir for CO_2 (cont'd)

- Modification of forest protocols should track with Scoping Plan and be consistent with other sectors
- ARB likely to maintain authority over GHG accounting and should provide oversight for forest accounting methodologies to ensure consistency
- California-Grown measure is good way to promote climate benefits of forests while keeping business and environmental benefits in state.

Resource Recovery – Include Sections on Recycling and Waste Reduction (cont'd)

- Sections contemplated dealing with recycling and waste reduction absent in Discussion Draft
  - Missing significant opportunity to cost-effectively reduce GHG emissions from mining, manufacturing, forestry, transportation and electricity sectors, while reducing methane emissions from landfills
  - 25% reduction in materials typically collected curbside could deliver 5 MMTCO2E of GHG reductions

Resource Recovery – Include Sections on Recycling and Waste Reduction (cont'd)

- **References to waste issues in draft focus exclusively on conversion technologies, rather than on proven recycling and composting technologies**
  - No quantifiable evidence that conversion technologies are as or more effective than other management options
  - State should evaluate all end-of-life management options, including composting and anaerobic digestion, before endorsing any conversion technologies

Resource Recovery – Include Sections on Recycling and Waste Reduction (cont'd)

- **The draft report lacks any reference to composting strategies, despite multiple GHG benefits, including:**
  - Avoided landfill emissions
  - Greater carbon sequestration in crop biomass and soil
  - Reduced need for GHG-releasing fertilizers and pesticides
  - Decline in energy-intensive irrigation
  - Well-established, technology supports in-state agriculture
  - Composting is explicitly identified as the highest and best use for organic material under California law

Global Warming Action Coalition

American Lung Association of California
Audubon California
California League of Conservation Voters
California Tax Reform Association
California Wind Energy Association
Californians Against Waste
CalPIRG
Center for Clean Air Policy
Center for Energy Efficiency and Renewable Technologies
Climate, Community and Biodiversity Alliance
Climate Protection Campaign
Coalition for Clean Air
Community Environmental Council
Earthjustice
Environment California
Environmental Defense
Friends of the Earth
Global Green USA
Kirsch Foundation
Natural Resources Defense Council
Pacific Forest Trust
Planning and Conservation League
Redefining Progress
Sierra Club California
The Nature Conservancy
The Utility Reform Network
Tomales Bay Institute
Transportation and Land Use Coalition
Union of Concerned Scientists